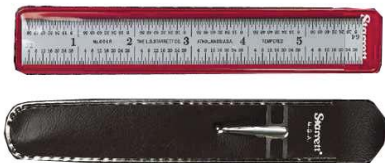


## PRECISION INSTRUMENTS

# Starrett®

### 6" SPRING TEMPERED STEEL RULES



Permit accurate measurements even when you cannot see if rule is even with measuring edge. Graduations in 8ths, 16ths, quick reading 32nds, and 64ths. Width 3/4", thickness 3/64". Satin chrome finish.

Furnished with a protective case with see-through front.

**Product # - 336950**

Mfg. # - C604R-6 - Lgth., 6"; Catalog No. C604R-6; EDP No. 52678

Packed 6

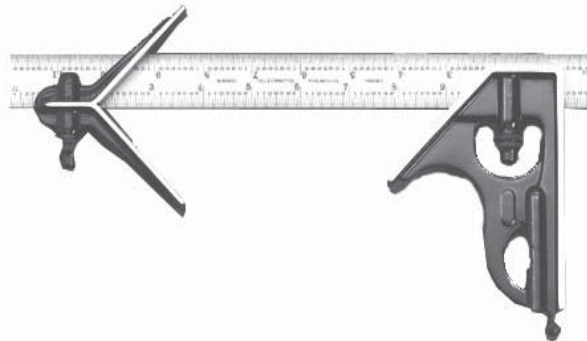
### MAGNET



**Product # - 430350**

Mfg. # - NE60-434; 1 3/8" dia, pot type magnet with 1/4-20 thread holes for attaching fixtures.

### COMBINATION SQUARES With Square Head and Center Head



**11HC Series**

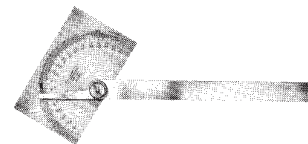
As the name indicates, these tools can be used for many different purposes - a complete substitute for a whole set of common solid tri-squares, a 45 degree miter, a depth gage, a height gage, a marking or scribing gage, a level, a plumb, and by withdrawing the blade it can also be used as a precision rule. This saves littering the workbench with too many tools, each being necessary but may be used less. The combination square with center head is a basic combination set. The center head is a convenient and accurate way to find the center or round work. Cast Iron Heads with black wrinkle finish. With reversible lock bolts, scriber, spirit level and hardened steel, machine-divided blade with regular finish.

**Product # - 355538**

Mfg. # - 11HC-12-4R - EDP No. 50056 - Sz., 12"; Regular Blade; Grad., No. 4R - 8ths, 16ths, Quick Reading 32nds, 64ths.

### STEEL PROTRACTOR

# Starrett®



**No. C183  
0-180 Degrees**

Useful for setting bevel, transferring angles and as small T-square. Double graduations from 0 to 180 degrees in opposite directions permit reading an angle directly and also supplementary angle. Six inch blade can be locked firmly at any angle by patent lock joint and knurled nut. Flat back allows use for drafting. Head is rectangular, providing four working edges. Satin chrome finish for ease of reading and resistant to rust.

**Product # - 355539**

Mfg. # - C183 - EDP No. 50672 - 6" Blade; Range: 0 - 180½.



## PRECISION INSTRUMENTS

## DIAL INDICATOR MAGNETIC BASES

With On and Off Switch



- Accepts all A.G.D. Dial Indicators with lug-backs and Test Indicators with stems 1/4" and 5/32" dia. • Powerful, permanent magnetic base.

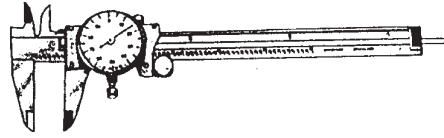
**Economy Model****Product # - 345239**

Mfg. # - 98-268-6 - Magnet Base  
LxWxH, 2-1/2 x 1-7/8 x 2-1/8";  
O'all Hght., 9"; Fine Adj., Yes



## DIAL SLIDE CALIPER

Starrett®

**(American Made)****No. 120 Series - 0 to 6" Range  
0 to 12 Inch**

The Only American Made Dial Caliper . . . This is one of the handiest measuring tools available, used by mechanics and toolmakers everywhere. It is direct reading, reliable and accurate. Readability Features: Sharp, clear dial graduations of .001" or 0.02mm - .100" or 2mm in one revolution. Sharp, black graduations on the satin finished bar, every .100" or 2mm. Ease of handling features: Knife-edge contacts for both inside and outside measurements. One hand use with the thumb-operated, fine adjustment roll. Lock screw for dial bezel. Lock screw for holding the sliding jaw in position. Depth rod attachment available to set the tool for accurate depth measurements on 6" (150mm) and 9" sizes. Parallel lines may be scribed on a workpiece by setting the caliper jaw to the required dimensions, locking the movable jaw with the lock screw and then using the front edge of the fixed jaw as the scribing surface. Accuracy and Long-Life Features: Hardened stainless steel bar, measuring surfaces, rack, gears, and depth rod. Positive, split-gear anti-backlash control. Rack teeth point down to make it easy to shed foreign matter and thereby keep the area clean.

**Product # - 336680**

Mfg. # - 120A-6 - EDP No. 64514 - Range 0 to 6 inches - Grad., .001"; Dial Color - White; Fitted Plastic Case

## PRECISION INSTRUMENTS

### MAGNETIC BASE INDICATOR HOLDER

657AA

Starrett®

For use with all Starrett Test, AGD, Dial and Miniature-Dial Indicators. Also accommodates similar indicators of other manufacturers. Powerful, permanent magnetic base holds firmly to steel or iron surfaces-horizontally, vertically, upside-down. Push button turns magnetic force on or off for quick, one-hand set-up and take-down. V-step adapts base to horizontal or vertical arbors and chucks. There is an extra 1/4-20 NC tapped hole in the side of the base for the indicator mounting post. Three precision ground magnetic contact surfaces (plus V-step). Black wrinkle finish on non-working surfaces.



**Attachments Include:**

**A. No. 657P Magnetic Base.** 1 15/16 x 1 5/8 x 1 7/8" (50 x 40 x 48 mm). Push-button on/off switch for one-hand operation. Base has three precision ground, magnetic contact points. Grips horizontally, vertically, and upside down. V-step holds base to arbors, shafts, etc. Base has extra 1/4-20 tapped hole on one side for mounting post. Black wrinkle finish on non-working surfaces.

**B. No. 657G Upright Base Post.** 3/8" (9.5 mm) diameter x 7 7/16" (190 mm) length overall. Starrett No. 57S and No. 58S Universal Snugs may also be used.

**C. No. 657S Snug.** Two 1/4" (6.3 mm) diameter holes. Adapts Nos. 196, 650, and 651 Series Dial Indicators and No. 657Y Indicator Attachment to No. 657X Rod.

**D. No. 657X Rod.** 1/4" (6.3 mm) diameter x 6" (150 mm) long. Accommodates Starrett Nos. 708, 709, 811 and 711F Series Dial Test Indicators and No. 657S Sleeve.

**E. No. 657Y Indicator Attachment.** 1/4" (6.3 mm) O.D. one end, other end threaded and fits lug backs of all AGD indicators (Starrett Series Nos. 81, 25, 655, 656) and Series No. 80 Miniature Indicators.

**F. No. PT18724 Snug** 3/8" (9.5 mm) diameter post hole. 1/4" (6.3 mm) diameter gripping hole accommodates No. 657X Rod.

**Product # - 355513**

Mfg. #. - 657AA - EDP No. - 52743 - Magnetic Base w/All Attachments

### ADJUSTABLE PARALLELS



**3/8 to 2-1/4 Inch  
9.5 to 57 mm (Metric)  
154 Series**

Starrett adjustable parallels provide a wide range of use in layout, gaging, inspection work and for setups on various machine tools. Their adjustable feature makes it possible to adjust them to exact size by micrometer measurement and also permits use in place of several solid-type parallels. These parallels are useful as gages in checking the size of slots and openings. They are also convenient for use in machine vises, for leveling or adjusting work on setups of milling and grinding machines, shapers, planers, drill presses and for many other applications. Parallels slide smoothly and can be easily adjusted. The smaller sizes A, B, and C are locked by one screw while the larger sizes, D, E, and F, have two lock screws. All parallels are 9/32" (7mm) thick.

Range		Length		Catalog #	EDP #
Inch	mm	Inch	mm		
3/8-1/2	9.5-12.7	1-3/4	45	154A	50578
1/2-11/16	12.7-17.5	2-1/8	55	154B	50579
11/16-15/16	17.5-24	2-11/16	70	154C	50580
15/16-1-5/16	24-33	3-9/16	90	154D	50581
1-5/16-1-3/4	33-44	4-3/16	105	154E	50582
1-3/4-2-1/4	44-57	5-1/16	130	154F	50583

**Product # - 355527**

Mfg. # - S154LZ - Set of 6 Parallels - sizes A, B, C, D, E, F - in Case; Catalog # S154LZ; EDP # 50586

## Starrett®

UNIVERSAL BACK PLUNGER DIAL  
TEST INDICATORS**No. 196 Series -  
Graduation .001", Range .200"**

Accurate and reliable. Simple to operate. Rugged, with few moving parts. Smooth in operation. Inexpensive - the best indicator value you can buy. While there is a need for test indicators with finer graduations, such as our No. 708 Series, this indicator with graduations to .001" and 0.01 mm will handle by far the majority of jobs. Shank diameter is 1/4" (6.3mm). For full use, the operator first chooses the proper contact from the three hardened contact points that come with each model. Then the contact should be brought against the work with enough pressure to give the hand one full turn. Set the hand at zero by rotating

the dial with the knurled bezel. This provides one full rotation of the hand both to the right and left of zero, showing a rise or drop in the work and the amount of that variation.

**Attachments for Starrett No. 196 Include:****Contact Points & Adapter Only****Hardened Steel Contact Point:**

Catalog/Part No.	EDP No.
PT05471	70617
PT05472	70618
PT05473	70619

**Clamp** - No. PT99437 - EDP No. 64492 - with a 1-5/16" (33mm) flat or round capacity, 5/16" (8mm) post used with No. PT18718 Snug.

**Tool Post Holder** - No. PT99438 - EDP No. 64493 - 3/8" x 3/4" x 6" (9.5x19x150mm) with upright spindle 5/16" dia. x 4-1/2" lgth. (8x114mm). Use with No. PT18718 Snug.

**Snug (Sleeve) Complete** - No. PT18718 - EDP No. 50709 - Post hole has a 5/16" diameter (8mm) and 3/32-1/4" (2.4-6.3mm) holding capacity. Can be used on our No. 252 Height Transfer Gage, Nos. 57 and 257A and B Surface Gages, on No. 657A Magnetic Base and Swivel Post Assembly.

**Hole Attachment** - No. 196F - EDP No. 50706 - Lets indicator be used over obstructions and inside holes to a depth of approximately 1-5/8" (40mm).

**Product # - 355526**

Mfg. # - 196A1Z - EDP No. 50697; Grad., .001"; Dial Reading, 0-100; Range, .200"; Desc., Indicator with 3 Contact Points, Adapter, 3 Attachments\* in Case

\*Attachments include clamp, tool post holder, snug and hole attachment.

**Product # - 355525**

Mfg. # - 196B1 - EDP No. 50699; Grad., .001"; Dial Reading, 0-100; Range, .200"; Desc., Indicator with 3 Contact Points and No. 196R Adapter only.

**ATTACHMENTS FOR STARRETT NOS. 196,  
196M SERIES UNIVERSAL TEST INDICATORS**

Snug (Sleeve) Complete - No. PT18724 Post has a 3/8" diameter (9.5mm) and 3/32-1/4" (2.4-6.3mm) holding capacity. Can be used with our Nos. 57 and 257C and D Surface Gages and No. 657AA Magnetic Base with upright post.

**Product # - 355524**

Mfg. # - PT18724 (196L) - EDP No. 50710 - Sleeve Complete, 1/4" and 3/8" Holes

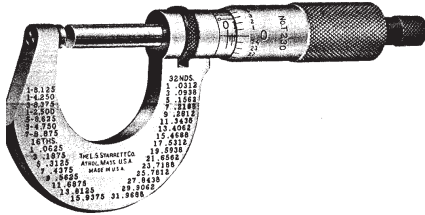
**DECIMAL EQUIVALENT CHART****Product # - 121400**

Mfg. # - 1214

## PRECISION INSTRUMENTS

### Starrett®

#### OUTSIDE MICROMETER



#### 436 Series - 0 to 1" Range

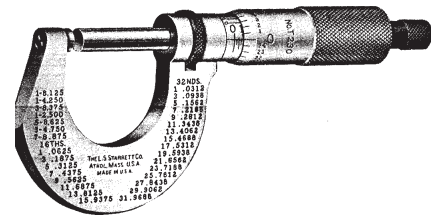
These are the most popular precision micrometers used by skilled workmen worldwide. They are accurate, rugged, and easy to use. These micrometers have rugged spindles and anvils sized at .270" (6.8mm) diameter. Readability - Starrett satin chrome finish - no glare - resists rust. Advanced sleeve design with staggered lines and distinct figures for precise and easy readability. Convenient decimal equivalents on one-inch micrometers. Ease-of Handling - Balanced frame and thimble design insure easy handling. Ring-type knurled lock nut for quick and sure locking. The combination ratchet and speeder for uniform pressure and quicker adjustment. Gracefully designed tapered frame for use in narrow slots and tight places. Accuracy and Long-Life - Rigid one-piece steel frame ribbed for extra-strength. Extremely hard and stable one-piece spindle (the heart of our accuracy). Micro-lapped measuring faces. 1" and 25mm models sent in fitted case. Deluxe padded case available by ordering No. 910.

#### Product # - 355560

Mfg. # - T436XRL-1 - EDP No. 51572 - Range 0-1"; Graduation .0001"; Desc. Ratchet Stop, Lock Nut, Carbide Faces

### Starrett®

#### OUTSIDE MICROMETER



#### 230 Series - 0 to 1" Range

This is the jewel of precision micrometers used by skilled workmen. The spindle and anvil are sized at .235" (6mm) to reach places most micrometers cannot reach. Readability features: Starrett satin chrome finish - no glare - resists rust. Advanced sleeve design with staggered lines and distinct figures for precise and easy readability. Quick-reading figures - every thousandth numbered on inch tools. Convenient decimal equivalents on inch tools. Ease of Handling Features: Balanced frame and thimble design insure easy handling and better readability. Ring type knurled lock nut for quick and sure locking. Smooth friction thimble for uniform pressure. Gracefully designed tapered frame for use in narrow slots and tight places. Accuracy and Long-Life Features: Rigid one-piece frame of drop forged steel. Extremely hard and stable one-piece spindle (the heart of our accuracy). Micro-lapped measuring faces. Sent in fitted case. Deluxe padded case available by ordering No. 910.

#### Product # - 355523

Mfg. # - 230FL - EDP No. 50938 - Range, 0 to 1"; Grad., .001"; Desc., w/ friction thimble and lock nut

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## PRECISION INSTRUMENTS

## MEASURING INSTRUMENTS

## Mitutoyo

## TELESCOPING GAGE SET



## Series 155

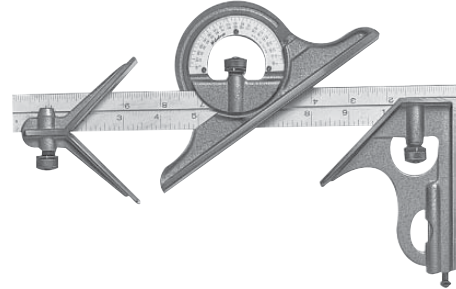
**Double Action-Self Centering For Quick Checking Of Inside Measurements**

- Uniform contact pressure • Plunger on gage expands in hole to be measured is locked in place and gage is removed from the hole. Final hole size is obtained by measuring over contacts with a micrometer.
- Constant spring tension for uniform feel • Rigid handle with self centering feature • Satin chrome finished • Contact points are of hardened tool steel and precision ground on the end measuring radius • Six Telescoping Gages (set) are supplied in a handsome fitted carrying case.

**Product # - 103105**

Mfg. # - 155-903 - Set of 6 Gages; Range .315-5.90" (5/16"-6") (8-150mm)

## COMBINATION SQUARE SETS



## Series 180

**Product # - 103109**

Mfg. # - 180-905 - 12"; Blade, 4R, (180-501); Square Head, (180-102\*); Center Head, (180-202\*); Protractor Head, (180-301)

\* Cast Iron - Not Hardened Head.

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## PITCH GAGES



## Series 950

Features: • Pitch size stamped on each gage • Whitworth, Unified and Metric Pitch Gages are available

**Product # - 103149**

Mfg. # - 950-253 - Range, 4-84 TPI; Description, Unified 60°, (51 Leaves)

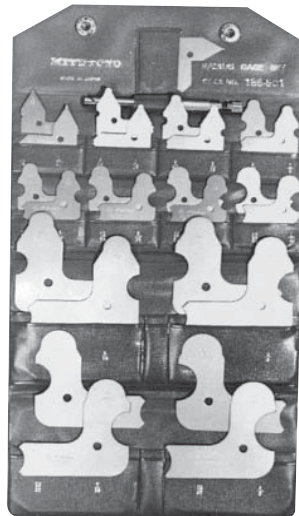
## RADIUS GAGE SETS

## Series 186

Radius Gage in holder provides fast check of radii. Five different gaging surfaces - ideal for checking convex and concave radii. Has a 4" holder with adjustable nut to hold blades. Each gage has radius marked on it and can be used individually for greatest accuracy and convenience. Stainless steel hardened and chrome finish. Furnished in plastic case.

**Product # - 103111**

Mfg. # - 186-901 - 25 Pieces; Sizes, 1/64" to 17/64" by 64ths and 9/32" to 1/2" by 32nds with holder.



## PRECISION INSTRUMENTS

### MEASURING INSTRUMENTS

# Mitutoyo

#### MAGNETIC STANDS



MITUTOYO Magnetic Stands, shown on these pages, accept all AGD-type Dial Indicators, Test Indicators and Probes having 3/8" Dia. shank and/or Lug Back with 1/4" Dia. mounting hole. The ON-OFF Switch offers instant mounting and dismounting without any adverse effect to the indicators or work surface.

**Product # - 103145**

Mfg. # - 7011BN - With 6" Adjustable Rod and Universal Clamp No. 952243

#### MICROMETER STAND

Use of this Micrometer Stand is recommended for sorting parts, batch inspection, incoming inspection etc. The stand enhances closer readings and more accuracy from hand-held measuring instruments. In addition to Outside Micrometers, the following instruments are designed to be held by the Micrometer Stand No. 156-101.

Series 145 Inside Micrometers

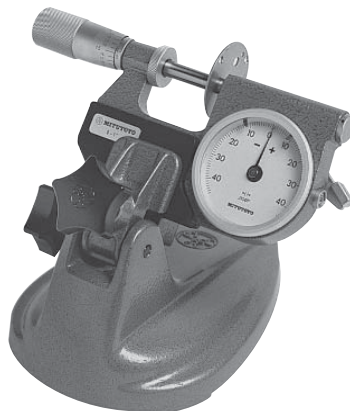
Series 510 Indicating Micrometers

Series 523 Dial Snap Meters

Series 201 Dial Snap Gages

**Product # - 103106**

Mfg. # - 156-101 - For .5" thru 4" micrometers



#### DIAL GAGE STANDS With Flat Anvil

The compact and versatile Dial Gage Stands are commonly used general-purpose stands for comparison measurements, 5" maximum-height capacity. They feature a wide fine-adjusting range for zero-setting gage heads. The stands are designed for AGD type probes with 3/8" Dia. stems, and accommodate all AGD type Dial Indicators.

**Product # - 103143**

Mfg. # - 7004 - Max. Height Capacity 4.0"; Fine Adjustment .04"; with Flat Anvil (No. 101461) and Swivel Clamp Assembly (No. 990264), Stem Clamp: .375".



#### IDC DIGIMATIC INDICATOR WITH ABSOLUTE ENCODER

**Series 543**

**Features** • Absolute Encoder ensures all settings and readings maintained for the life of the battery (even when power is off). • Preset, Zero-Set, Inch/mm, +/- direction and GO/ +/- NG functions • Face rotates 330 degrees for use at various angles • Immune to overspeed error • SPC output provided • Average battery life 5000 hours using SR44 battery • Quartzizing error: +/- 1 count • Uses Mitutoyo Group 2 dial indicator mounting backs

**Product # - 103133**

Mfg. # 543-250B; Range, 12mm; LCP Display, 0.001mm; Flat back

**Product # - 103134**

Mfg. # 543-270B; Range, 12mm; LCD Display, 0.01mm; Flat back



## PRECISION INSTRUMENTS

### MEASURING INSTRUMENTS



# Mitutoyo



#### AC POWERED IDC DIGIMATIC INDICATORS



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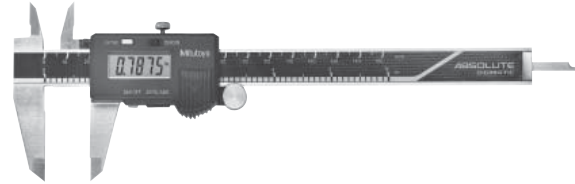
**Features:**

- Face markings in blue to denote AC power type. • No disruption of SPC capability by AC line. • +/-, Inch/mm, Preset & Zero functions.
  - Face swivels 330½ to mount at various angles.
- Note: All units provide SPC output.

**Product # - 103137**

Mfg. # - 543-382 - Range, 0-.5"/0-12.7mm; LCD Readout, .0001"/0.001mm; Lug-on-center back.

#### DIGIMATIC CALIPERS Without Output for SPC



**Series 500**

**Features:** • Provides digital readout to .00005"/0.01mm for error-free reading • Power-saving design-powered by a single SR-44 battery(541980 1-pc.; 541980-10 10-pc. set) • Battery life: Approx. two years under normal use (Approx. one year in continuous operation) • No rack, no pinion, no glass scale. Linear scale safety imbedded in epoxy • Hardened stainless throughout • Provides thumb roller to move the slider in small and smooth increments • O.D., I.D., step and depth measurements • Functions include: Zero-setting, Data hold, Error alarm, Low battery alarm, Data output. (NOTE: Data hold and output functions cannot be used at the same time) • Provided with a data output port for connection with the SPC system.

**Non-SPC Output Models**

**Product # - 103129**

Mfg. # - 500-196 - Range, 0-6"/0-150mm; LCD Res. .0005"/0.01mm; Measuring Jaws, Standard without SPC output; with Thumb roller and depth bar.

#### BATTERIES FOR CALIPERS (SR44)

# DURACELL®



**Product # - 668289**

Mfg. # - D303/357PK - Replaces: A, SR44(S) (W), SB-(A9), GS14, 9, J, G13F, 7 - 1.5 Volt Silver Oxide  
Packed 6



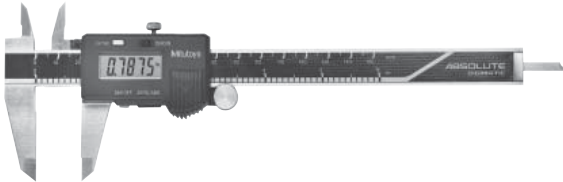
## PRECISION INSTRUMENTS

### MEASURING INSTRUMENTS



# Mitutoyo

#### ABS DIGIMATIC CALIPERS Featuring Position Memory and 3.5 Year Battery Life



#### Series 500

Mitutoyo's new ABS (Absolute) Digimatic Caliper offers special functions which allow it to always remember its measuring position even after the gate has been switched off. • **Origin:** Allows setting of an origin starting point to be used as reference in subsequent measurements (generally set to closed jaw position). Once set, the ABS caliper will switch on showing its true position from the origin point rather than 0.0000 as with standard models. • **Zero/ABS:** Allows the display to be Zero-Set at any point along the slider for incremental comparison measurements. This switch will also allow return to the absolute mode and display of the true position from the origin point. • Also provided is inch/mm conversion and SPC data output. Another outstanding feature of the ABS Digimatic Caliper is 3.5 years of use under normal working conditions from just a single SR44 battery cell. (541980). • **Optional Accessories:** SPC Connecting Cables No. 959149 (1m), No. 959150 (2m). Features built-in Data Switch; Add on Hold Switch.

#### Product # - 103127

Mfg. # 500-171 - Range, 0-6"/0-150mm; LCD Res. .0005"/0.01mm; with SPC output; Measuring Jaws, Standard

#### Product # - 103128

Mfg. # - 500-172 - Range, 0-8"/0-200mm; LCD Res. .0005"/0.01mm; with SPC output; Measuring Jaws, Standard, Jaw Depth 1.97"

#### ELECTRONIC CALIPER



Caliper 6 inch Electronic Digital • Resolution: .0005" • Conversion: inch/metric • Remembers origin in the off position. • SPC output. • With depth gage. • Battery included.

#### Product # - 120039

Mfg. # - J57-016-060

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## PRECISION INSTRUMENTS

## MEASURING INSTRUMENTS

ELECTRONIC CALIPER  
IMPORT

Rugged construction of stainless steel with no rack, no pinion, and no glass scale.

**Features:**

- 5 Digit high contrast display.
- Inch/Metric switch.
- Floating "ZERO" reference point.
- Resolution +/- .0005" / 0.01mm.
- Accuracy .001".
- SPC Output.
- Four way measurement.
- Includes: fitted case/battery

**Product # - 7251006**

Mfg. # - 7251006 - 6" Electronic Caliper

**Product # - 7251008+**

Mfg. # - 7251008 - 8" Electronic Caliper

## BOREMATIC GAGE



Digimatic Bore Gage for quick, high accuracy measurements of internal diameters. Inserting the measuring probe into a bore to be checked and release the handle. Three self-aligning contact points snap open to meet the hole diameter and the large, high contrast digital display presents the reading.

**Features:**

- Available as individual gages or as interchangeable head sets
- Optional extension rods available for measuring deep bores
- LCD readout .00005"/0.001mm
- Carbide tipped contact points ensure long life
- Efficient measurement using two measurement modes - ABS (absolute) and INC (incremental) modes.
- Can be linked to the M-SPC (Mitutoyo Statistical Process Control) system
- Rotatable display unit for easy reading at any angle
- Functions include: • Origin setting, Origin restoration, Zero-setting, Presetting, Data hold, Error alarm, Low-battery alarm, Data output
- Power supply: SR44 (button-tye silver oxide cell), 2 pcs.

**Product # -103140**

Mfg. # - 568-403 - Individual Range\*, .425 - .5"



Mitutoyo

## DIGIMATIC MICROMETERS

**Series 293 with or without SPC output**

Features:

- Extra large LCD readout
- Lightweight design and digital display allow measurements to be taken with the micrometer held in one hand
- Two measuring modes - ABS (absolute) and INC (incremental) - for efficient measurement (with SPC output Model).
- Function available: Origin setting, Inch/mm selection, Zero-setting, Data Hold only with SPC Models, Error alarm, Auto-sleep, Data output
- Can be linked to the SPC system
- Three types of constant-force devices are available: ratchet stop, ratchet-friction thimble, and friction thimble.
- Carbide tipped measuring faces
- Battery: SR44 (541980)X 1 pc. for models up to 11-12" range.
- Micrometers of ranges up to 4" (100mm) are "One-touch preset type"
- Origin setting function (ABS mode):

The origin point value can be displayed with a touch of the ORIGIN button. (It is also possible to set any value as the origin).

- Zero setting function (INC mode).
- Rotating Spindle Types - Inch/Metric
- **Replacement Battery: #541980 (1 pc.), #541980-10 (10 pcs./SET)**

**Product # - 103121+**

Mfg. # - 293-722-30 - Range 1-2"/25.4-50.8mm; LCD Readout .0005"/0.001mm; Accuracy +/- .0005"; with SPC output & Standard Ratchet Stop

**Product # - 103122+**

Mfg. # - 293-723-30 - Range 2-3"/50.8-76.2mm; LCD Readout .0005"/0.001mm; Accuracy +/- .0005"; with SPC output & Standard Ratchet Stop

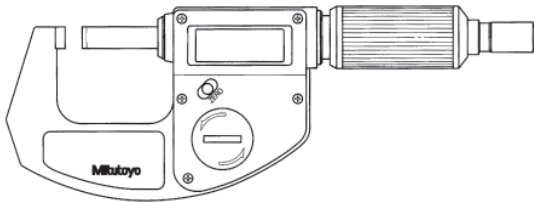
## PRECISION INSTRUMENTS

### MEASURING INSTRUMENTS

# Mitutoyo



#### DIGIMATIC MICROMETER MDC-LTE



MDC-Lite is an economy version Digimatic Micrometer with a slimmer design and lighter weight than the other models.

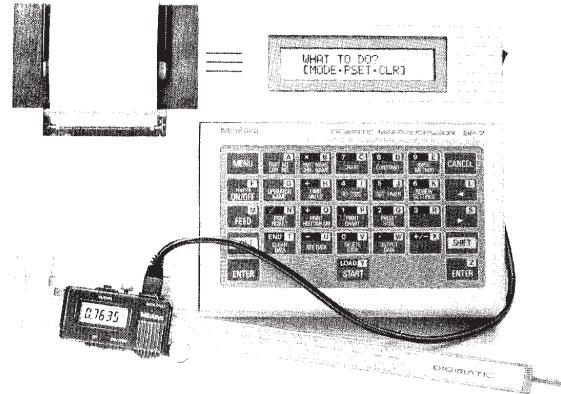
**Features:**

- Inch/Metric Key
- The world's lightest digital micrometer .55 lbs in weight
- Made slim for easy access to the stepped feature as in the line drawing shown
- Easily measures 0 through 1"/25.4 mm resolution to .00005"/0.001mm
- Measuring faces carbide tipped
- Includes a zero-set key for easy origin setting
- A ratchet stop thimble for a constant measuring force
- Measurement readout with large characters on the LCD screen
- The display stays on for the entire battery life (approximately 1.2 years)
- Battery: SR44 (1pc.) Prod. No. - 668289
- No spindle clamp, no data output

**Product # - 103125+**

Mfg. # - 293-815 - Range; 0-1"/0-25.4mm; LCD Resolution, .00005"/0.001mm; Accuracy at 20°, +/- .0001"/+/- 2um; Zero-set, inch/mm key, Ratchet Stop

#### DP-7 DIGIMATIC MINIPROCESSOR



#### Series 264

The DP-7 Mini processor offers similar functions to the DP-3DX while incorporating alternate software which allows simplified user operation. With the DP-7 it is possible to access different levels of the program with great flexibility and minimal required keystrokes. The DP-7 operates on either AC or battery power for portability. The built-in, 4-color plotter produces statistical analysis results as well as graphic charts. Over 2400 measurements can be entered at one time with subgroups for 20 independent characteristics on up to 20 different workpieces. Analyses possible with the DP-7 include: measurement data points, number and range of subgroups, average (X), standard deviation, control charts for X-bar R, X-bar S, and X-Rs. It can also print: number of measurement values, max/min. values, range, standard deviations (o(R), o(S), on-1), number/fraction of defective parts, estimated fraction defective, process capability and machine capability index plus histograms.

**Product # - 103119+**

Mfg. # - 264-540A - Data Processor with built-in X-Y plotter. Supplied with AC adapter.

The DP-7 offers the added capability of data storage on hard Memory Cards. The Memory Cards are optional and can be **Special Ordered** by calling your **Summers** Representative. There is no minimum quantity.



## PRECISION INSTRUMENTS

**Starrett®****MECHANIC'S IMPROVED LEVELS**

**With Ground  
and Graduated Vials  
4 to 18 Inch  
No. 98 Series**

Starrett No. 98 Mechanic's Improved Levels have a ground and graduated main vial. All sizes have a cross test vial, except the 4 inch size. The 12 inch size has in addition a plumb vial, and the 18 inch size a double plumb vial. Plumb vials on 12" and 18" Levels are ground. The main vials are adjustable to positive setting and are housed in a satin chrome brass tube with a friction fit closing cover, to prevent breakage. The level bases are made of finest quality seasoned castings with black wrinkle finish, accurately machined and finished on the bearing surface. An involute groove between the bearing flats provides accurate seating on the round work, such as shafting, etc. This groove has a special involute design permitting better centering and greater capacity to handle larger rounds. Groove and bearing flats are machined in one setting for maximum accuracy. With the cross test level, it is possible to level simultaneously in both directions to prevent inaccuracies in main vial reading thru canting the level sidewise on round work. The 6" through 18" levels have graduations that are approximately 80-90 seconds or .005" per foot. Ground and Graduated Main Vial.

**Product # - 355536**

Mfg. # - 98-4 - Sz., 4"; 100 mm; Without Cross Test Vial; Cat. No. 98-4; EDP No. 50440

**Product # - 355535**

Mfg. # - 98-6 - Sz., 6"; 150 mm; With Cross Test Vial; Cat. No. 98-6; EDP No. 50441

**Product # - 355534**

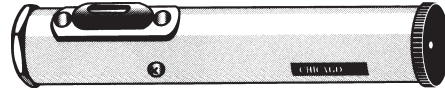
Mfg. # - 98-12 - Sz., 12"; 300 mm; With Ground Single Plumb Vial and Cross Test Vial; Cat. No. 98-12; EDP No., 50443

**\*ABOVE FURNISHED WITHOUT CASE\***

**Product # - 355532**

Mfg. # - 98Z-18 - Sz., 18"; 450 mm; With Ground Double Plumb Vial and Cross Test Vial; **Cat. No., 98Z-18; EDP No., 50446;**  
**WITH FINISHED WOOD CASE**

Packed 1 in a Box

**CST/berger****6" ROUND HAND LEVEL**

This high quality 6" long hand level has brass construction, fixed eyepiece and an externally mounted bubble assembly. The hand level body is electrostatically power painted bright safety-yellow. Hexagonal objective cap prevents rolling. Complete with belt loop case.

**Product # - 342010**

Mfg. # - 17-624